

APPENDIX II

VOLUME OF GASES <<

Values of $1+0.00367^t$

The quantity $1+0.00367/t$ gives for a gas the volume at t° when the pressure is kept constant, or the pressure at t° when the volume is kept constant, in terms of the volume or the pressure at 0° .

(a) This part of the table gives the values of $1+0.00367^t$ for values of t between 0° and 10° C. by tenths of a degree.

(6) This part gives the values of $1+0.00367^t$ for values of t between -90° and $+1990^\circ$ C. by 10° steps.

These two parts serve to give any intermediate value to one tenth of a degree by a simple computation as follows: In the (b) table find the number corresponding to the nearest lower temperature, and to this number add the decimal part of the number in the (a) table which corresponds to the difference between the nearest temperature in the (b) table and the actual temperature. For example, let the temperature be 682.2° :

We have for 680 in table (6) the number

3.49560

And for 2.2 in table (a) the decimal..... 0.00807

Hence the number for 682.2 is..... 3.50367

(a) VALUES OF $1+0.00367^t$ FOR VALUES OF t BETWEEN 0° AND 10° C. BY TENTHS OF A DEGREE

t	0.0	0.1	0.2	0.3	0.4
0	1.00000	1.00037	1.00073	1.00110	1.00147
1	.000367	.000734	.001101	.001467	.001834
2	.000734	.001101	.001467	.001834	.002201
3	.001101	.001467	.001834	.002201	.002568
4	.001467	.001834	.002201	.002568	.002935
5	1 .001834	1 .002201	1 .002568	1 .002935	1 .003302
6	.002201	.002568	.002935	.003302	.003669
7	.002568	.002935	.003302	.003669	.004036
8	.002935	.003302	.003669	.004036	.004403
9	.003302	.003669	.004036	.004403	.004770
t	0.5	0.6	0.7	0.8	0.9
0	1.00184	1.00220	1.00257	1.00294	1.00330
1	.00184	.00220	.00257	.00294	.00330
2	.00220	.00257	.00294	.00330	.00367
3	.00257	.00294	.00330	.00367	.00403
4	.00294	.00330	.00367	.00403	.00440
5	1 .00330	1 .00367	1 .00403	1 .00440	1 .00477
6	.00367	.00403	.00440	.00477	.00513
7	.00403	.00440	.00477	.00513	.00550
8	.00440	.00477	.00513	.00550	.00586
9	.00477	.00513	.00550	.00586	.00623

⁽¹⁾ Smithsonian Tables.